



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,258	07/09/2003	Junichi Nakano	16825	9860
23389	7590	06/30/2005	EXAMINER	
SCULLY SCOTT MURPHY & PRESSER, PC 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NY 11530			SOHN, SEUNG C	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/616,258	Applicant(s) NAKANO ET AL.	
	Examiner Seung C. Sohn	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 3-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 703.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. ***Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Alegi (Patent No. US 5,990,475).***

Regarding claim 1, Alegi shows in Fig. 2 a first substrate having light-emitting elements (24); a second substrate having photoconductive switch elements (26), whose number is equal to that of the light-emitting elements, the light-emitting elements and the photoconductive switch elements being arranged to face each other, the photoconductive switch elements being turned on/off in accordance with lighting/extinction of the light-emitting elements; and a third substrate arranged between the first substrate and the second substrate, the third substrate (14) having through holes (40), whose number is equal to that of the light-emitting elements, each through hole being arranged between the light-emitting element (24) and the photoconductive switch element (26) facing each other, drive light emitted from each light-emitting element traveling to the photoconductive switch element via the through hole.

Regarding claim 2, Alegi shows in Fig. 2 the second substrate has a circuit wiring connected to the photoconductive switch elements on the side facing the third

substrate, the third substrate has a concave portion (34) extending along the circuit wiring, such that the through holes terminate on the bottom surface of the concave portion, and the third substrate has conductivity at least in the vicinity of the surface of the concave portion.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. ***Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alegi (Patent No. US 5,990,475).***

Regarding claims 9-12, Alegi shows the claimed invention as above, but does not disclose the second pair of light emitting element and the photoconductive switch element. It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the second pair of light emitting element and the photoconductive switch element for the purpose of transmitting more signals at the same time.

Allowable Subject Matter

5. **Claims 3-8 are objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

Claims 3-8 are allowable because the prior art fails to disclose or make obvious, either singly or in combination, a biological material imaging system and the method thereof comprising, in addition to the other recited features of the claim, "the third substrate further has a convex portion protruding from the bottom surface of the concave portion, and the convex portion has a height equal to or smaller than a depth of the concave portion".

Conclusion

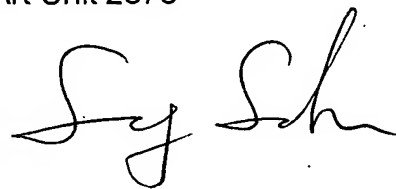
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung C. Sohn whose telephone number is (571) 272-2446. The examiner can normally be reached on Monday through Friday from 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2878

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Seung C. Sohn
Examiner
Art Unit 2878

A handwritten signature in black ink, appearing to read 'Sg Sohn', is positioned below the printed name and title.